

REMARKS**Rejection of Claims on Art Grounds in the 04/29/2004 Office Action, and Traversal Thereof**

In the 29 April 2004 Office Action, claims 1-43 have been rejected on prior art grounds, under 35 U.S.C 102(b) as being anticipated by Template v. 8.0 Workflow Template. The above rejections of the claims 1-43 on the stated art and utility grounds are traversed, and consideration of the patentability of the claims 1-43 is requested, in light of the following remarks.

Arguments for Patentability

In the 29 April 2004 Office Action, the Examiner cites and strongly relies upon the Template product line WFT Development Environment (WFT) as anticipating the present invention. WFT discloses a program that facilitates the development of software designed for the automation of business or organizational operations by providing simple graphical ways to develop and implement the desired software product. WFT allows the user to create a software program by simply placing graphical icons corresponding to source code elements into a “workspace” window where the user may establish functional relationships between the elements using a combination of clickable buttons and pull-down menus. (See 4-5 Object Model Editor) This system greatly facilitates the creation of a workflow software program because of the relatively simple and higher-order assembly of program components.

Although the WFT system allows for the development of custom-designed source code elements that can be incorporated into the workspace, the WFT system does not allow the simultaneous viewing of graphical and textual representations of the source

code, wherein changes can be made at the source code level and automatically reflected in both textual and graphical views. More importantly, the graphical representation provided by the WFT system workspace is the *first and only* representation of assembled source code elements available. The WFT system does not allow for the successive collapse (or multiple collapsing rounds) of related source code elements and their associated interactions into a representative symbol while maintaining a memory of these identities and relationships such that their expanded graphical representation could be reconstituted on command. This is in contrast to the present invention which allows for the repeated collapse of related source code elements that comprise a functional unit or pattern into a representative symbol while maintaining a retrievable memory of its properties to allow for the reconstitution of the expanded view. By providing this feature, the present invention allows the user to simplify the graphical representation of the source code and to view higher order views of the program, which greatly facilitates the development of complex (and otherwise burdensome) programs.

Another key distinction between the WFT Environment and the present invention is that the present invention operates by modifying the source code directly via the transient meta-model (TMM) which stores a language-neutral representation of the source code used to generate the simultaneous textual and graphical views. By contrast, the WFT system merely allows the user to assemble prefabricated or customized components from a set of preexisting or pre-created files – not the “round-trip engineering” provided by the present invention, wherein changes made at the source code level to either the textual or graphical views are immediately and automatically reflected in the other view. The Examiner does refer to the ability of the user to create a new class within the workplace diagram by clicking a button; however, this description provides no

further detail as to the mechanism that the program uses to accomplish this task. (See 4-9) Since the WFT Environment does not provide for the immediate and automatic conversion of source code-level edits between the textual and graphical views but, instead, merely assembles prefabricated or pre-created, custom source code elements, the WFT system does not operate through a conventional repository nor a TMM like the present invention. To avoid error, modifications made to the source code elements in the WFT system must not alter their ability to interact with other source code elements.

The Examiner refers to the ability of the WFT system to search for general features in the software project such as classes or names. However, these functions of WFT merely search for and find those components. (See 2-30 to 2-31) Unlike the present invention, the WFT does not conduct these searches *in the context of and for the purpose of identifying related source code elements for the automated collapse of the related elements and their relationships into a representative symbol* to allow for the facilitated viewing of higher order graphical representations of the source code.

Lastly, the Examiner refers to the *Collapse* command as part of the Object Model Editor as having similarity to the present invention. However, this command merely “collapses” a list of class options shown in the class box to stop showing the class families. (See 4-7) The *Collapse* command does *not operate in any way to collapse or affect the graphical representation* of the source code elements displayed in the workspace.

The present invention is also distinguishable over the prior art cited by the examiner inasmuch as the present invention provides for building and then manipulating diagrams from code by parsing the comments and the code, whereas the O-O CASE Tool, Template Software WFT “Using the WFT Development Environment” reference

cited by the examiner (hereinafter referred to as "WFT Environ") does not make any representation as to this capability. The present invention provides for a transient meta model that is built directly from the source code. Thus, the present invention works directly from the source code using a single source approach to parse the source code and create a semantic extension of the source code, semantic comments, that provide for a mixture of source code and comments in the form of a diagram which can then be directly manipulated from the source code.

The applicant asserts that the present invention provides for simplifying portions of the graphical representation of the code associated with a pattern or group of related elements by collapsing their respective symbols within the graphical view, substituting representative identifiers in lieu of their collapsed symbol, in particular in independent claim 1. By contrast, the referenced WFT Environ teaches collapsing of classes within a class list with no reference to simplification of the graphical view other than the option to display relation attributes among the currently displayed classes within the object model editor. Thus the present invention as claimed is distinguishable over the prior art WFT Environ reference.

Claims 1-43 are asserted to be in patentable condition. Allowance of these claims is hereby respectfully requested. In the event that the Examiner finds additional minor modifications that would place these claims in allowable condition, the Examiner is respectfully requested to make telephonic contact with the Attorney of Record to discuss and make changes via Examiner's Amendment to place the claims in condition for allowance.

The above rejections of the claims 1-43 on the stated art and utility grounds are traversed, and consideration of the patentability of the claims 1-43 is requested, in light of the foregoing remarks. Favorable action is therefore requested.

CONCLUSION

In view of the foregoing, claims 1-43 constituting the claims pending in the application, are submitted to be fully patentable and in allowable condition to address and overcome the rejections.

If any issues remain outstanding, incident to the allowance of the application, Examiner Ingberg is respectfully requested to contact the undersigned attorney at (919)-664-8222 or via email at jinang@trianglepatents.com to discuss the resolution of such issues, in order that prosecution of the application may be concluded favorably to the applicant, consistent with the applicant's making of a substantial advance in the art and particularly pointing out and distinctly claiming the subject matter that the applicant regards as the invention.

This Office Action response is submitted via facsimile to the official group fax number at 703.872.9306 on August 28, 2004.

Respectfully submitted,


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